November 24, 2003

The Honorable Barbara Cubin
House of Represenatives
Washington, DC 20515

Dear Madam Chairman,

Thank you for the invitation to participate in your field hearing in Gillette, Wyoming on November 24, 2003 titled "Coal's Contribution to the United States Economy and the Intermountain West.". My assigned topic is to discuss challenges facing the Wyoming coal industry. There are many challenges to choose from, but unfortunately time during the hearing is limited. Some of the topics that could be discussed include:

- The surety-bonding crisis in the United States. Following 9-11, surety-bonding companies have demonstrated a desire to exit the business, leaving the industry scrambling to meet State and Federal bonding requirements. In some instances, bonding costs have soared over 500% over the past five years. To further exacerbate the problem, surety companies are now merging, further reducing access to bonding capacity.

- Global climate change. Efforts to regulate CO_2 as a pollutant, in an effort to reduce "global warming", would result in a dramatic reduction in coal usage. This is a concern of the national coal industry and you are fully aware of the issue.

The two issues that we will discuss, and which are relative unique to the Wyoming coal industry include:

- EPA's rulemaking on the Particulate Matter (PM) National Ambient Air Quality Standards (NAAQS).

- EPA's rulemaking to reduce mercury emissions from coal-fired power plants.

Finally, we would like to thank you for your leadership in making sure that the Wyoming coal industry has a viable future. Your position as Chair of the Subcommittee on Energy and Mineral Resources has proved invaluable to the citizens of the State of Wyoming.

Sincerely,

Greg Schaefer

Particulate Matter Rulemaking

Background

The Wyoming Mining Association and member companies have been monitoring PM_{10} and $PM_{2.5}$ at collocated sites in the Powder River Basin (PRB). The Southern PRB site has been in place for over nine years. Over this period, several types of monitors were utilized at the SPRB site.

Monitor	Date
Anderson Dichotomous Sampler	5/14/94-11/10/94
University of Minnesota Trichotomous	7/21/95-8/25/96
R&P Partisol 2000	8/31/96-6/29/99
R&P FRM	7/23/99-Present
Co-located Wedding FRM PM_{10} Monitors	Period of Record
TEOM PM_{10}	1/20/02 - Present

The purpose of the monitoring program has been to characterize $PM_{2.5}$ and PM_{10} concentrations in the PRB as a result of EPA's proposals to implement new $PM_{2.5}$ and $PM_{10-2.5}$ (also known as PM_{coarse}) standards. Prior to EPA's adoption of a $PM_{2.5}$ Federal Reference Method (FRM), state-of-the-art monitors were utilized. The PM_{10} monitors are a requirement of the Wyoming Department of Environmental Quality Air Quality Division in order to demonstrate compliance with the PM_{10} National Ambient Air Quality Standards (NAAQS). This PM monitoring network makes the PRB of Wyoming arguably the most heavily monitored area in the United States.

Regulatory Framework

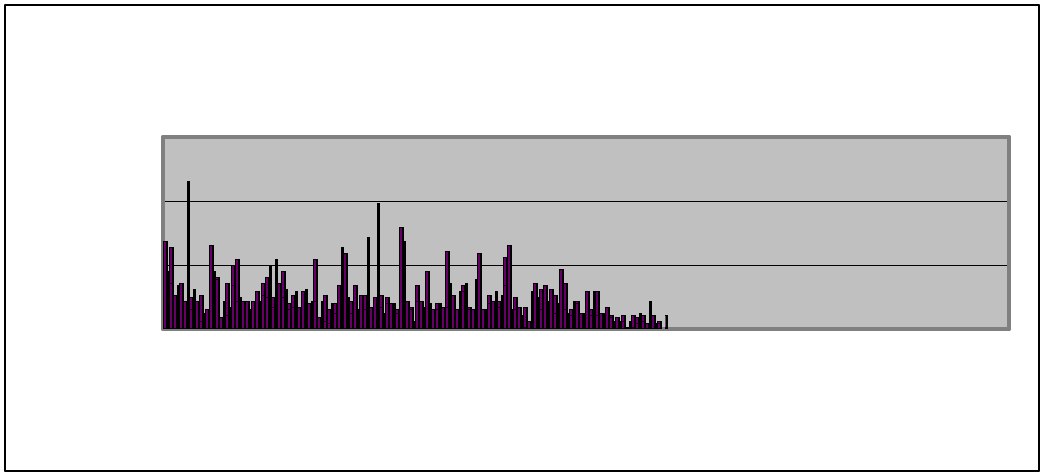
The U.S. Environmental Protection Agency is under an obligation to re-assess the Particulate Matter (PM) NAAQS and implement any new standards in 2005. EPA staff is recommending that a new $PM_{2.5}$ (fine particulate) standard be implemented, and also recommends a new PM_{coarse} standard that would be represented by PM_{10}-$PM_{2.5}$. The discussion of this new coarse PM standard is that the current PM_{10} standard contains both $PM_{2.5}$ and the PM coarse fraction. The new standards recommended by EPA are expressed as follows:

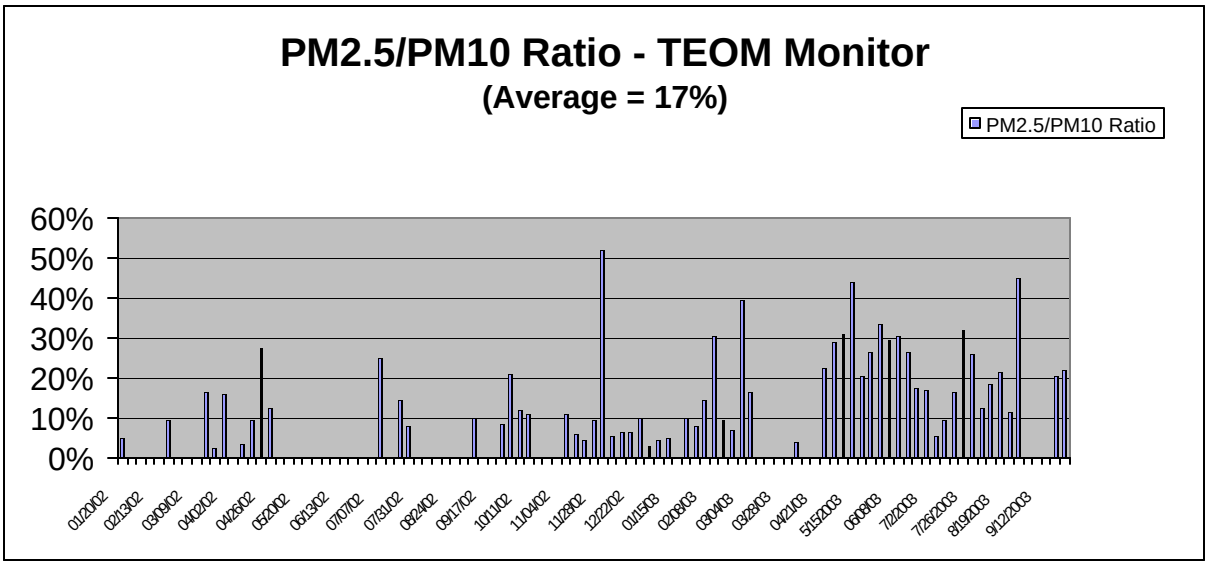
Standard	24-Hour	Annual
$PM_{2.5}$	25-65 ug/m3	12-15 ug/m3
$PM_{10-2.5}$ or PM_{coarse}	30-75 ug/m3	13-30 ug/m3

These recommendations are based on several key assumptions that are faulty when considered in a rural environment. The first faulty assumption is that the health studies related to the coarse PM fraction, which were conducted in urban environments, are representative of rural environments. The second key assumption is built upon the first faulty assumption. Under this assumption, EPA used an urban atmosphere PM2.5/PM_{10} ratio of 45% to 65% to convert existing PM_{10} data to PM_{coarse}. This compares to a rural atmosphere $PM_{2.5}/PM_{10}$ ratio, as measured in the PRB, of only 17%. This is a huge difference, but one that is not surprising considering the large differences between an urban and rural atmospheres. As will be discussed in the following text, the result is that at the levels of the standard being proposed by EPA, western rural environments will be unduly and unfairly penalized.

Analysis

The Wyoming Mining Association is uniquely qualified to provide comment on the proposed PM standards due to the large amount of data that has been collected, and the experience gained. The first observation is that there is no Federal Reference Method (FRM) for $PM_{10-2.5}$. One option for EPA would be to require collocated PM_{10} and $PM_{2.5}$ monitors, and would simply subtract the concentrations to arrive at the PM_{coarse} value. Based upon the monitoring data collected in the PRB, it is evident that this construct **will not** work. The following graphs show the $PM_{2.5}/PM_{10}$ ratio for the Southern PRB. What this graph shows is that frequently the $PM_{2.5}$ monitor records more particulate matter than does the PM_{10} monitor (i.e., the ratio exceeds 100%), which is physically impossible. What is clearly evident is that while there are federal reference methods for both PM_{10} and $PM_{2.5}$ monitors, there is no federal reference method between the monitors. The PM_{10} monitors in the SPRB are Wedding FRM monitors.





The PM2.5/PM_{10} ratio from the above chart ranges from a low of 3% to a high of 52%, and an average of 17%. This ratio can then be used to quantify an equivalent comparison of a PM_{10} and PM_{coarse} standard. EPA's proposed PM_{coarse} standard in a rural environment is dramatically more stringent than the current standard.

	PM_{10} 24-Hr Std	**$PM_{2.5}/PM_{10}$ Ratio**	**PM_c Equivalent**	**EPA Proposed PM_c Range**	**% Reduction**
	150 ug/m3				
Min		3%	146 ug/m3	30-75 ug/m3	80%-49%
Avg		17%	125 ug/m3	30-75 ug/m3	76%-40%
Max		52%	72 ug/m3	30-75 ug/m3	58%-4%

This analysis shows that on average, the 24-hour PM_c standard as proposed by EPA is 40% to 76% more stringent than the current 24-hour PM_{10} standard.

PM_{10} Annual Std	**$PM_{2.5}/PM_{10}$ Avg**	**PM_c Equivalent**	**EPA Proposed Annual Std Range**	**% Reduction**

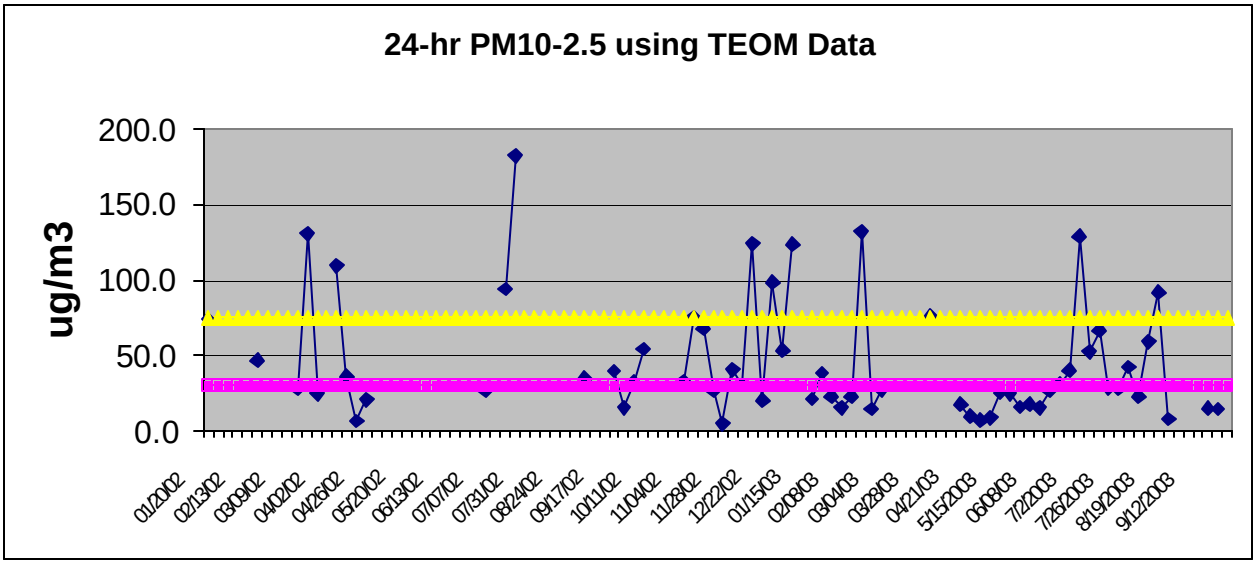
50 ug/m3	17%	42 ug/m3	13-30	69%-29%

Similarly, the annual average PM_c standard as proposed by EPA is 29% to 69% more stringent than the current PM_{10} annual standard.

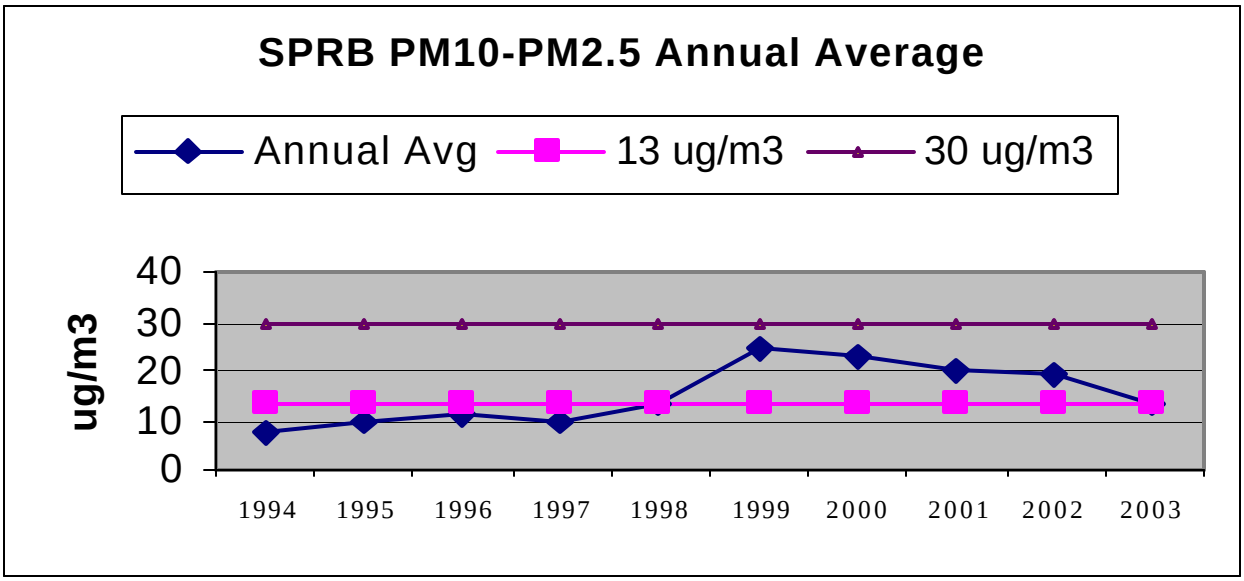
Again, this increase in stringency far exceeds that which would be experienced in an urban environment. The PM_{coarse} standard was recently addressed by the Clean Air Scientific Advisory Committee (CASAC) at a meeting to address the PM standards. CASAC is an advisory body to EPA. Dr. Sverre Vedal, a medical expert and member of CASAC wrote "It is my opinion that proposing a coarse PM standard is premature at this time. Observational finding are based on time series studies about which, to my mind, here is sufficient uncertainty to preclude setting a standard." Other similar comments be provided once the transcript of the meeting is made available.

Compliance Analysis - PM_c

An accurate assessment of compliance is not possible due to the problems identified above (i.e., $PM_{2.5}/PM_{10}$ ratios in excess of 100%; no FRM for PM_{10}-$PM_{2.5}$; large differences in FRM PM_{10} monitors; etc.). However, using the simple mathematical process of subtracting $PM_{2.5}$ from PM_{10} gives at least a qualitative assessment of how surface mining operations might fare with a new PM_c standard. The chart provides a qualitative assessment that due to the increased stringency of the PM_c standard, rural generators of coarse crustal material will find it difficult to comply.



A similar analysis for the proposed PM_c annual standard leads to a similar conclusion that compliance will be difficult, particularly if the lower end of the EPA recommended range be selected.



Conclusion

EPA is proposing a new PM_{coarse} standard that will be significantly more stringent in a rural environment than in an urban environment. This is not only unfair, but is scientifically indefensible considering that the health studies used to recommend the new standard were all conducted in urban environments (which isn't surprising as that is where people live).

What are the options to address this problem?

- Retain the PM10 standard at current levels. Congressional action validating the retention of the standard would be helpful, as EPA is reacting to a court decision that appears to push EPA into eliminating PM_{10} as a standard and replacing it with a PM coarse standard. Unfortunately, there is insufficient data and analyses to support any new PM coarse standard.

- Substitute the current PM_{10} with a research PM_{coarse} standard. This would require EPA to first develop a PM_{coarse} federal reference method, and deploy the monitors to obtain a valid database. The research standard would be set at the same level as the current PM_{10} standard.

EPA Mercury Rulemaking

U.S. EPA is engaged in a rulemaking process to reduce emissions of mercury from coal-based electric generation units. A proposed rule is to be issued not later than December 2003, followed by a final rule within one year. If EPA relies upon the Maximum Achievable Control Technology (MACT) provisions of the Clean Air Act, the mercury rule could be among the most costly regulatory mandates ever issued.

Despite its high potential cost, the mercury rule stands to produce little, if any, measurable public health benefit. U.S. electric utilities emit approximately 47 tons of mercury annually, or one-third of total U.S. airborne mercury emissions. The mercury emitted by U.S. power plants represents one percent of global mercury emissions. Because mercury is circulated globally, reductions of U.S. mercury emissions would have only a small effect on mercury deposition in the United States. Modeling and risk assessment studies by Brookhaven National Laboratory have found no support for plant-specific mercury controls, and negligible benefit to local populations from mercury controls at specific plants

EPA should establish subcategories that recognize differences among various mercury emission sources based upon:

1) Coal rank as fired as defined by ASTM;

2) Coal mercury variability within a seam and between seams;

3) Variability of other coal and flue gas constituents (e.g., chlorine, sulfur, and unburned carbon), since they can impact mercury control;

4) Compliance test methodology compared to ICR test methodology;

5) Plant size and currently installed environmental control equipment e.g., SCR, FGD and particulate control device (ESP or fabric filter);

6) Effectiveness and variability of retrofit mercury emission control processes; and

7) Plant firing system, particularly between fluidized bed and pulverized coal fired units.

Plants representing more than 300,000 megawatts of electrical capacity, or more than 50% of the nation's total electric supply, may be affected by EPA's mercury rule. National energy security requires that the mercury rule allow generators sufficient time to install equipment to come into compliance while

ensuring reliability of electricity supply. EPA also should ensure that the rule does not cause coal supply disruptions or coal market dislocations, by creating market advantages or disadvantages for different coal types.